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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,530	02/07/2002	Michael P. Dunk	08215-406001 / P03-025998	7845

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EXAMINER	
DEBERADINIS, ROBERT L	

ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/067,530	DUNK ET AL.	
	Examiner	Art Unit	
	Robert DeBeradinis	2836	

-- The MAILING DATE of this communicati n appears on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *17 June 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/24/02, 5/15/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by LO 6,501,196.

Regarding claims 1, 6-9.

LO discloses a fault tolerant AC transfer switch comprising:

An actuator (746A) that converts current into a force to move contacts relative to one another to switch power on and off in the AC electrical circuit;

A source (726A) that operates to supply current to the actuator;

An actuator control system (figure 7A) connected to the actuator (746A) and to the source (726A) to control the current to the actuator (746A);

Wherein the current to the actuator is independent of a voltage (voltage on contacts) produced by the actuator during switching and a voltage (VA) at which the source operates.

Claim R jections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-5, 10-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over LO 6,501,196 in view of KOJIMA 6,118,613.

Regarding claim 2.

LO discloses the system of claim 1.

LO does not disclose an amplifier that controls the current from the source to the actuator.

KOJIMA discloses an amplifier (44) that controls the current from the source (30) to the actuator (figure 6).

It would have been obvious to one having ordinary skill in the art at the time of this invention to modify the reference of LO to have an amplifier that controls the current from the source to the actuator. The motivation would be to provide a negative resistance circuit to provide a damping operation of the drive circuit of the actuator (column 11, lines 25-35).

Regarding claim 3.

LO in view of KOJIMA discloses the system of claim 2 comprising a controller (108) and the amplifier, and configured to sense voltage from the source to control current to the actuator.

Regarding claim 4.

LO in view of KOJIMA discloses the system of claim 1 in which the source (VA) operates at a voltage that is less than the voltage produced by the actuator during switching.

LO in view of KOJIMA does not disclose wherein the source operates at a voltage that is greater than the voltage produced by the actuator during switching.

The Examiner takes official notice. The voltage that drives the actuator in the cited references is independent to the voltage that is controlled by the actuator.

It would have been obvious to one having ordinary skill in the art at the time of this invention to modify the above references to provide a voltage that is greater than the voltage produced by the actuator during switching. The motivation would be to switch an actuator that requires the higher voltage.

Regarding claim 5.

LO in view of KOJIMA discloses the system of claim 1 in which the actuator converts the current into the force to move the contacts relative to one another.

LO in view of KOJIMA does not disclose wherein the contacts move in a linear direction relative to one another.

The Examiner takes official notice. Actuators that provide linear movement are well known in the art.

It would have been obvious to one having ordinary skill in the art at the time of this invention to modify the LO to have a linear movement contactor. The

motivation would be to move large heavy contacts that would exhibit large oscillations if switched by a non-linear actuator.

Regarding claims 10-16, 18-25.

LO discloses a method for controlling an actuator connected to an AC electrical circuit the method comprising:

Supplying power to an actuator (46A).

LO does not disclose controlling current to the actuator such that the current to the actuator is independent of a voltage produced by the actuator during switching and a voltage at which the power is supplied.

KOJIMA discloses driving the actuator with a constant current.

The Examiner takes official notice. It is well known in the art that a constant current source drive controlling the actuator is independent to the voltage developed by the actuator during the switching.

It would be obvious to one having ordinary skill in the art at the time of this invention to modify LO to include a constant current to control the actuator. The motivation would be to provide an actuator control current that was independent to the back EMF or voltage produced by the actuator during switching to provide constant control current to the actuator.

Regarding claim 17.

LO in view of KOJIMA discloses the system of claim 1 in which the actuator converts the current into the force to move the contacts relative to one another.

LO in view of KOJIMA does not disclose wherein the contacts move in a linear direction relative to one another.

The Examiner takes official notice. Actuators that provide linear movement are well known in the art.

It would have been obvious to one having ordinary skill in the art at the time of this invention to modify the LO to have a linear movement contactor. The motivation would be to move large heavy contacts that would exhibit large oscillations if switched by a non-linear actuator.

Any inquiry concerning this communication should be directed to Robert L. DeBeradinis whose number is (571) 272-2049. The Examiner can normally be reached Monday-Friday from 8:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Brian Sircus, can be reached on (571) 272-2058. The Fax phone number for this Group is (703) 872-9306.

RLD

MAY 13, 2004